

# MONTHLY WEATHER REVIEW.

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The MONTHLY WEATHER REVIEW is based on data from about 3500 land stations and many ocean reports from vessels taking the international simultaneous observation at Greenwich noon.

Special acknowledgment is made of the data furnished by the kindness of cooperative observers, and by R. F. Stupart, Esq., Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. I. S. Kimball, General Superintendent of the United States Life-Saving Service; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Director Meteorological Office, London; Maxwell Hall, Esq., Government Meteorologist, Kingston, Jamaica; Rev. L. Gangotiti, Director of the Meteorological Observatory of Belen College, Havana, Cuba.

As far as practicable the time of the seventy-fifth meridian is used in the text of the MONTHLY WEATHER REVIEW.

Barometric pressures, both at land stations and on ocean vessels, whether station pressures or sea-level pressures, are reduced, or assumed to be reduced, to standard gravity, as well as corrected for all instrumental peculiarities, so that they express pressure in the standard international system of measures, namely, by the height of an equivalent column of mercury at 32° Fahrenheit, under the standard force, i. e., apparent gravity at sea level and latitude 45°.

## FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

### IN GENERAL.

The general weather features of October, 1907, conformed rather closely to seasonal averages. Barometric pressure over middle and northern latitudes of the continents increased, and a corresponding decrease occurred in the high latitudes of the oceans. The second decade of the month was marked by storms of exceptional violence over the eastern Atlantic and western Europe. This stormy period culminated on the 18th, when barometric pressure reached a reported minimum of 28.60 inches at Valentia, Ireland. During the prevalence of the storms over the Atlantic and Europe high barometric pressure and fine weather prevailed over the United States east of the Rocky Mountains. After the 20th the movement of barometric areas over the Northern Hemisphere was rapid. On the Atlantic coast the severest storm of the third decade prevailed from the 28th to 30th. No well-defined storm advanced northward from the West Indies. The lower Lakes were visited by storms of notable strength on the 7th and 27th. Ample and timely warnings were issued in connection with all storms that visited the seacoasts and Great Lakes of the United States.

The most important local storm reported for the month moved northeastward over Galveston, Tex., at 12:30 a. m. of the 30th, with a wind velocity, at the Weather Bureau station, of 64 miles an hour for a five-minute period and an extreme velocity for two minutes of 76 miles an hour. The barometer fell and rose .30 of an inch in fifteen minutes. Many buildings were wrecked, and one person was reported killed and many injured.

Snow was reported in the mountains of New York and New England on the 20th, in upper Michigan on the 27th, and in the mountains of Virginia and West Virginia on the 28th.

On the 1st, light to heavy frosts occurred in the Lake region, and light frost in the Ohio Valley. On the morning of the 2d frost was heavy in the interior of New York and New England and light as far south as Virginia. Heavy frost was reported in Kansas, Nebraska, Wisconsin, and Michigan on the 8th, and light frost in the Texas panhandle. On the 9th, heavy frost occurred in the Ohio Valley, the lower Lakes, and the interior of the Middle Atlantic States. The first general frost-bearing cool wave of the season moved from the middle Missouri and upper Mississippi valleys to the Atlantic coast from the 12th to 15th, with heavy to killing frosts as far south as the interior

portions of the middle and east Gulf and South Atlantic States. Heavy frost occurred in the interior of the Southeastern States on the 22d and 29th, and on the latter date light frost was reported in the interior of northern Florida.

### BOSTON FORECAST DISTRICT.\*

[New England.]

Monthly means did not depart greatly from October averages. Gales on the 7-8th caused considerable damage to shipping, and a severe storm prevailed on the 28-29th. There were slight snowfalls in Maine, New Hampshire, and Vermont on the 20th.—*J. W. Smith, District Forecaster.*

### NEW ORLEANS FORECAST DISTRICT.\*

[Louisiana, Texas, Oklahoma, and Arkansas.]

October was warmer than usual with rainfall one to two inches above the normal. Frost warnings were issued for northern portions of the district on several dates, and, as a rule, were partially verified. No storm warnings were issued and no general storm occurred on the Gulf coast.—*I. M. Cline, District Forecaster.*

### LOUISVILLE FORECAST DISTRICT.\*

[Kentucky and Tennessee.]

An almost unbroken spell of dry, pleasant weather prevailed from the 8th to 25th. The rainfall of the month was confined practically to the 3d-4th, 7-8th, and 26-27th. Normal temperature prevailed in the main, altho there were several cool waves. Light frost was general on the 9th, light to heavy frost on the 12th and 13th, and heavy frost on the 14th, 15th, 28th, and 29th. There was also light frost in northern Kentucky on the 19th, 21st, and 22d, and in southeastern Tennessee on the 16th. Frost warnings were issued on the 8th, 12th, 13th, and 28th.—*F. J. Walz, District Forecaster.*

### CHICAGO FORECAST DISTRICT.\*

[Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, and Montana.]

No unusual weather conditions prevailed during the month. No severe storms past over the upper Lakes. Storm warnings were issued on five dates in advance of disturbances of moderate intensity. No wrecks were reported on the upper Lakes. No cold wave warnings were issued.—*H. J. Cox, Professor and District Forecaster.*